

**WHAT IS CLAIMED IS:**

1. A route-optimization method comprising the steps of:
  2. sending a binding request;
  3. receiving a binding update in response to the binding request, wherein the binding update includes a care-of address of a mobile node;
  5. creating a binding to the care-of address responsive to receipt of the binding update;
  7. sending a path message responsive to receipt of the binding update, wherein the path message explicitly binds a data path of a packet flow to the mobile node; and
  9. receiving a reservation request message responsive to the path message.
1. 2. The method of claim 1 wherein a correspondent host performs the steps of sending the binding request, receiving the binding update, creating the binding, sending the path message, and receiving the reservation request message.
1. 3. The method of claim 1 operating according to mobile IP version 4.

1           4.     The method of claim 1 operating according to mobile IP version 6.

1           5.     The method of claim 3 operating according to RSVP.

1           6.     The method of claim 4 operating according to RSVP.

1           7.     The method of claim 5 wherein the path message comprises an RSVP  
2     PATH message and the reservation request message comprises an RSVP RESV message.

1           8.     The method of claim 6 wherein the path message comprises an RSVP  
2     PATH message and the reservation request message comprises an RSVP RESV message.

1           9. A correspondent host adapted to:

2           send a binding request;

3           receive a binding update in response to the binding request, wherein the

4           binding update includes a care-of address of a mobile node;

5           create a binding to the care-of address responsive to receipt of the binding

6           update;

7           send a path message responsive to receipt of the binding update, wherein

8           the path message explicitly binds a data path of a packet flow to the mobile node; and

9           receive a reservation request message responsive to the path message.

1           10. The host of claim 9 adapted to operate according to mobile IP version 4.

1           11. The host of claim 9 adapted to operate according to mobile IP version 6.

1           12. The host of claim 10 adapted to operate according to RSVP.

1           13. The host of claim 11 adapted to operate according to RSVP.

1           14. The host of claim 12 wherein the path message comprises an RSVP PATH  
2 message and the reservation request message comprises an RSVP RESV message.

1           15. The host of claim 13 wherein the path message comprises an RSVP PATH  
2 message and the reservation request message comprises an RSVP RESV message.

1        16. A route-optimization method comprising the steps of:  
2            receiving a binding request; and  
3            sending a binding update in response to the binding request, wherein the  
4        binding update includes a care-of address of a mobile node, a binding to the care-of  
5        address is created responsive to receipt of the binding update, a path message that explicitly  
6        binds a data path of a packet flow to the mobile node is sent responsive to receipt of the  
7        binding update, and a reservation request message is sent responsive to the path message.

1        17. The method of claim 16 wherein the steps of receiving and sending are  
2        performed by a home agent.

1        18. The method of claim 16 wherein the steps of receiving and sending  
2        are performed by the mobile node.

1        19. The method of claim 16 operating according to mobile IP version 4.

1        20. The method of claim 16 operating according to mobile IP version 6.

1           21.    The method of claim 19 operating according to RSVP.

1           22.    The method of claim 20 operating according to RSVP.

1           23.    The method of claim 21 wherein the path message comprises an RSVP  
2        PATH message and the reservation request message comprises an RSVP RESV message.

1           24.    The method of claim 22 wherein the path message comprises an RSVP  
2        PATH message and the reservation request message comprises an RSVP RESV message.

1           25. A route-optimization method comprising the steps of:  
2           receiving a binding request;  
3           sending a binding update in response to the binding request, wherein the  
4           binding update includes a care-of address of a mobile node;  
5           receiving a path message sent in response to receipt of the binding update,  
6           wherein the path message explicitly binds a data path of a packet flow to the mobile node;  
7           and  
8           sending a reservation request message responsive to the path message.

1           26. The method of claim 25 wherein the steps of receiving the binding request,  
2           sending the binding update, receiving the path message, and sending the reservation request  
3           message are performed by the mobile node.

1           27. The method of claim 25 wherein the steps of receiving the binding request  
2           and sending the binding update are performed by a home agent and the steps of receiving  
3           the path message and sending the reservation request message are performed by the mobile  
4           node.

1           28.    The method of claim 25 operating according to mobile IP version 4.

1           29.    The method of claim 25 operating according to mobile IP version 6.

1           30.    The method of claim 28 operating according to RSVP.

1           31.    The method of claim 29 operating according to RSVP.

1           32.    The method of claim 30 wherein the path message comprises an RSVP  
2        PATH message and the reservation request message comprises an RSVP RESV message.

1           33.    The method of claim 31 wherein the path message comprises an RSVP  
2        PATH message and the reservation request message comprises an RSVP RESV message.

1           34. A home agent adapted to:  
2           receive a binding request; and  
3           send a binding update in response to the binding request, wherein the  
4           binding update includes a care-of address of a mobile node, a binding to the care-of address  
5           is created responsive to receipt of the binding update, a path message that explicitly binds  
6           a data path of a packet flow to the mobile node is sent responsive to receipt of the binding  
7           update, and a reservation request message is sent responsive to the path message.

1           35. The agent of claim 34 adapted to operate according to mobile IP version 4.

1           36. The agent of claim 35 adapted to operate according to RSVP.

1           37. The agent of claim 36 wherein the path message comprises an RSVP PATH  
2           message and the reservation request message comprises an RSVP RESV message.

1           38.    A route-optimization system comprising:

2                a home agent receiving a binding request and sending a binding update

3                responsive to the binding request, wherein the binding update includes a care-of address

4                of a mobile node; and

5                a correspondent host receiving the binding update, sending a path message,

6                the path message explicitly binding a data path of a packet flow to the mobile node, in

7                response to receipt of the binding update, and receiving a reservation request message

8                responsive to the path message.

1           39.    The system of claim 38 adapted to operate according to mobile IP version 4.

1           40.    The system of claim 39 adapted to operate according to RSVP.

1           41.    The system of claim 40 wherein the path message comprises an RSVP

2                PATH message and the reservation request message comprises an RSVP RESV message.